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REMARKS

Claims 1-26 are pending in the present Application. Claims 1-26 have been rejected. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claim Rejections Under 35 U.S.C. § 102(b)

Claims 1-3, 5-7, 9, 10, 11, 12 and 15-19 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by U.S. Patent No. 5,302,774 to Berg et al. (Berg).

Berg is directed to a process for the production of bisphenols from acetone and phenols using a sulfonic acid ion exchange modified with alkyl-SH groups. Berg teaches that the addition of water to the reaction can improve selectivity. (Col. 1, lines 52-55) Berg also discloses that the addition of water helps to maintain the "uniform activity" of the catalyst. (Col. 2, lines 22-25) Furthermore Berg teaches that the amount of water added to the educt mixture is 0.6 to 5% by weight. (Col. 2, lines 67-68).

In the examples, Berg discloses differing amounts of water (1% and 2%) in different reactions but the amount of water in the feed is constant and does not vary. Accordingly Applicants assert that Baird does not teach or suggest modifying the amount of water added to the reaction feed based upon *para-para* bisphenol selectivity during an ongoing reaction. While Berg notes a relationship between selectivity and water concentration in Example 1, Berg does not teach or suggest that the selectivity of the reaction can be managed through the water concentration in the feed within a single continuous reaction.

In the most recent office action the Examiner has asserted that the claims as written do not require an adjustment in a single run process. Applicants respectfully disagree. The instant claims state "adjusting the concentration of the water in the feed based upon the *para-para* bisphenol selectivity" (emphasis added). By adjusting the concentration in the feed, it is clear that the reaction is not halted and a new feed introduced.

To anticipate a claim, a reference must disclose each and every element of the claim. *Lewmar Marine v. Barient Inc.*, 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987). Applicants

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respectfully assert that Berg does not disclose adjusting the water content during an ongoing reaction based upon the *para-para* bisphenol selectivity.

Claim 24 stands rejected under 35 U.S.C. § 102 (b), as allegedly anticipated by USP 5,302,774, JP 57-31629, JP 10-21257 or JP 10-251180. Applicants respectfully traverse this rejection.

Berg discloses the inclusion of water in a process for the production of bisphenols from acetone and phenols using a sulfonic acid ion exchange modified with alkyl-SH groups. Berg does not disclose controlling the amount of water over time in the reaction feed based upon the amount of catalyst and catalytic activity. In fact, Berg teaches that catalytic activity remains uniform (Col. 2, lines 24-25).

JP 57-31629 merely discloses reacting phenol and acetaldehyde in the presence of an acid catalyst and water. While the abstract mentions a high selectivity coefficient, the abstract does not teach or suggest controlling the amount of water over time in the reaction feed based upon the amount of catalyst and catalytic activity.

JP 10-21257 discloses adding water in an amount of 0.05 to 0.5 wt% to a reaction for producing bisphenol A and reducing the amount of water over time. While the abstract discloses reducing the amount of water with time, the abstract does not teach or suggest controlling the amount of water modifying or altering the amount of water in the reaction based upon the amount of catalyst and catalytic activity or to maintain a selectivity of at least about 94% as is instantly claimed.

JP 10-251180 discloses adding water in an amount of 0.05 to 0.5 wt% to a reaction for producing bisphenol A. The abstract does not teach or suggest controlling the amount of water in the reaction based upon the amount of catalyst and catalytic activity.

Because none of the cited references teach all elements of the claim, namely controlling the amount of water in the reaction during a run based upon the amount of catalyst and catalytic activity, none of the cited references, can anticipate Claim 24.

Claim 26 is rejected under 35 U.S.C. § 102(b), as allegedly anticipated by, or, in the alternative rejected under 35 U.S.C. §103(a) as unpatentable over Berg, JP 57-31629,

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JP 10-21257 or JP 10-251180. Applicants respectfully disagree.

As discussed above, only one of the cited references, JP 10-21257, discloses changing the amount of water added to the reaction. JP 10-21257 generally describes reducing the amount of water over time. None of the references teach changing the concentration of the water in the feed when the feed is being reacted in the presence of a catalyst at different feed rates in order to maintain a desired level of *para-para* bisphenol selectivity.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-23 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,302,774 in view of U.S. Patent No. 4,400,555, U.S. Patent No. 4,822,923, U.S. Patent No. 4,859,803.

Claims 24 and 25 are rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,302,774, JP 57-31629, JP 10-21257 and JP 10-251180.

Claim 26 is rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,302,774, JP 57-31629, JP 10-21257 or JP 10-251180.

Applicants respectfully traverse these rejections.

Berg has been discussed above. '555, '923 and '803 have been cited to provide various teachings such as use of a multi stage reaction and recycle of the reaction mixture. '555, '923 and '803, like Berg, do not teach or suggest monitoring the *para-para* bisphenol selectivity or adjusting the water concentration in the reaction feed during an ongoing reaction based upon the *para-para* bisphenol selectivity. As asserted above, none of the references disclose or suggest varying (or controlling) the amount of water in the feed during an ongoing reaction in order to achieve or maintain a desired level of *para-para* bisphenol selectivity. The references simply do not suggest dynamic control of water concentration during an ongoing reaction or monitoring a reaction result for the purposes of dynamic control. Accordingly Applicants believe that the pending claims are non-obvious.

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It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 07-0893.

Respectfully submitted,

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